

## NEW RECORDS OF CARIDEAN SHRIMPS IN THE GULF OF CALIFORNIA, MEXICO

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*Abstract.*—New records are provided for six species of caridean shrimps in the Gulf of California. *Alpheus splendidus* is reported for the first time from the eastern Pacific. *Veleronia laevifrons* and *Periclimenes soror* are noted for the first time from the Gulf of California. The pandalids *Pantomus affinis* and *Heterocarpus vicarius* are reported for the first time from off Sinaloa. *Alpheus websteri* has been taken off San Carlos, Sonora.

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Recent collecting in the Gulf of California has resulted in the capture of caridean shrimps not reported there previously, or found outside of their recorded ranges. During a research cruise of the B/O *El Puma* of the Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México, two series of specimens of Pandalidae were found off the coast of Sinaloa, on the eastern side of the Gulf of California. Alex Kerstitch, University of Arizona, collected shrimps by SCUBA diving along the coast of Sonora, to the north of Sinaloa. The specimens have been deposited at the Estacion Mazatlán and the Allan Hancock Foundation, University of Southern California.

### Family Palaemonidae *Periclimenes soror* Nobili

*Periclimenes soror* Nobili, 1904:232.—Bruce, 1976:299–306, figs. 1–4.—Castro 1982:11. (See Bruce 1976 for an extensive synonymy.)

*Previous records.*—Widespread in the Indo-West Pacific region: Red Sea, Indian Ocean, Australia, Malaysia, tropical Pacific east to Hawaii, Taboga Island, Panama (Bruce 1976); Gorgona Island, Colombia (Castro 1982).

*Material examined.*—SONORA: Bahía San Carlos, 20 m, on sea star *Mithrodia bradleyi* Verrill, 28 Dec 1982, A. Kerstitch, 2 specimens.—Punta Doble, 20 m, under sea stars *M. bradleyi*, *Oreaster occidentalis* Verrill, *Nidorellia armata* (Gray) and *Astrometis sertulifera* Xantus; 25 Jun 1983, A. Kerstitch, 24 specimens.

*Remarks.*—*Periclimenes soror* previously has been found in association with 16 species of sea stars, including *O. occidentalis*, *M. bradleyi*, and *N. armata* (Bruce 1976; Castro 1982). This is the first report of *Astrometis sertulifera* as a host of *P. soror*.

In his field notes, Alex Kerstitch reported that “about 75% of the larger sea stars may have 2–4 shrimps apiece” at Punta Doble.

### *Veleronia laevifrons* Holthuis

*Veleronia laevifrons* Holthuis, 1951:199–201, pl. 63, figs. f–m.

*Previous records.*—ECUADOR: off Cabo San Francisco, 4 m.—off La Playa, Bahía Santa Elena, 4–13 m. GALÁPAGOS: Gardner Bay, Isla Española (Hood Island), 7 m (Holthuis 1951).

*Material examined.*—SONORA: Bahía San Carlos, 20 m, among *Parazoanthus* sp., 28 Dec 1982, A. Kerstitch, 1 specimen.—Isla Peruano, 10 m, on gorgonians *Eugorgia aurantica* Verrill and *Muricea californica* Aurivillius, 28 Jun 1983, A. Kerstitch, 27 specimens.—Isla Candolero, near Guaymas, 20 m, on *Parazoanthus* sp., 2 Jan 1984, A. Kerstitch, 17 specimens.

*Remarks.*—Photographs of living animals by A. Kerstitch show the shrimp resting along the main axis of a branch of *E. aurantica*, which they match well in color.

Family Alpheidae

*Alpheus websteri* Kingsley

*Alpheus websteri* Kingsley, 1880:416.—Wicksten 1983:42–43. (See Wicksten 1983 for a more extensive synonymy.)

*Previous records.*—Eastern Atlantic, Caribbean, southern Gulf of California to Galápagos (Wicksten 1983).

*Material examined.*—SONORA: Morro Colorado, 10 m, among rocks and *Sargassum* sp., 1 Jan 1984, A. Kerstitch, 1 specimen.

*Alpheus splendidus* Coutière

*Alpheus splendidus* Coutière, 1897:235.—Banner and Banner 1982:56–60, fig. 12.

*Previous records.*—Red Sea, Seychelles, Indonesia, Malaysia, Thailand, Philippines, and Hong Kong (Banner and Banner 1982).

*Material examined.*—SONORA: San Carlos, 5 m, under rock, 8 Jul 1983, A. Kerstitch, 1 specimen.

*Remarks.*—Alex Kerstitch took a color photograph of the living shrimp. The color pattern matches the description provided in French by Coutière (1897)—a slender bright yellow band from rostrum to the telson, bordered with two brown bands, the rest of the body reddish except for two straight white lines contiguous to the brown bands; pincers light orange.

Family Pandalidae

*Pantomus affinis* Chace

*Pantomus affinis* Chace, 1937:116–118, fig. 13.—Wicksten and Méndez 1983:82–85, pl. E, fig. 31.—Wicksten 1983:21.

*Previous records.*—Bahía Santa Inez, Baja California, western side of Gulf of California, Mexico.—Golfo de Dulce, Costa Rica.—southwest of Islas Lobos de Tierra, Perú (Wicksten and Méndez 1983).

*Material examined.*—Off coast of Sinaloa, 25°45'N, 109°34'W, trawled, 91 m, silty bottom, 12 May 1982, B/O *El Puma*, 56 specimens including 2 ovigerous females.

*Heterocarpus vicarius* Faxon

*Heterocarpus vicarius* Faxon, 1893:203; 1895:148–151, pl. 40, figs. 1–1b.—Chace 1937:118.—Méndez 1981:100–101, pl. 41, figs. 296–299.

*Previous records.*—Isla de San Ildefonso and Punta Gorda, Baja California, Bay of Panama, Pacific coast of Colombia, Perú (Méndez 1981).

*Material examined.*—Off coast of Sinaloa, 24°57'N, 108°41'W, otter trawl, 75 m, sand, 3 May 1982, B/O *El Puma*, 58 specimens.

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